

URBAN/MUNICIPAL

CA4 ON HBL W26

A32

1993 -

AGENDA OF THE

DEVELOPMENT COMMITTEE

JAN. 7/93-

URBAN/MUNICIPAL

CA4 ON HBL W26

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1993

A G E N D A

DEVELOPMENT COMMITTEE

1993 01 07

G E N E R A L

NEW BUSINESS:

1. Report on Psychological Profiles, Referral Information and Outcomes in Secondary School and Post-Secondary School for Exceptional and Non-Exceptional Students

Pages 1 to 13

URBAN MUNICIPAL

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GOV'TMENT DOCUMENTS

Education Centre
100 Main Street West
Hamilton, Ontario
1993 01 07

To the Chairman and Members of the
Development Committee
Hamilton Board of Education

Ladies and Gentlemen:

***Re: Report on Psychological Profiles, Referral Information and Outcomes in
Secondary School and Post-Secondary School for Exceptional and
Non-Exceptional Students***

Attached is a report on the Psychological Profiles, Referral Information and Outcomes in Secondary School and Post-Secondary School for Exceptional and Non-Exceptional Students which was prepared during the summer and fall of 1992.

Recommendation:

That the report on Psychological Profiles, Referral Information and Outcomes in Secondary and Post-Secondary School for Exceptional and Non-Exceptional Students be received for information.

Prepared by: M. Bountrogianni
Chief Psychologist

Submitted by: E. G. Bond
Superintendent of Program

Approved by: K. A. Rielly
Director and Secretary of the Board

A report on the Psychological profiles, referral information and outcomes in secondary school and post-secondary school for Exceptional and non-Exceptional students.

**Joe Trovato, Doreen Vella, Cynthia Wilkinson,
Connie Kidd, Joanne Reitzel, Lois Campbell,
Marie Bountrogianni
Summer/Fall 1992**

**Psychological Services
Hamilton Board of Education**

THE PURPOSE OF THIS CURRENT ENDEAVOUR WAS TO:

1. obtain descriptive data regarding the referral information of a sample of students referred to the Psychological Services and Special Education Departments and to compare this information for students eventually deemed Exceptional and those who were not deemed Exceptional;
2. compare student profiles and placements for students referred from Compensatory Education Schools with those of students referred from non-Compensatory Education Schools;
3. compare profiles and school performance for students with disturbed behavioural profiles: differences between externalizers (acting out) and internalizers (withdrawn);
4. compare students with different Exceptionalities and their outcomes in secondary and post-secondary schools.

DATA SOURCE:

The data source for the current investigation was the incorporation of the Psychological Services Database and the Special Education Student Information System. The Psychological Services Database included data on 2,200 assessments for the school years 1988/89, 1989/90, 1990/91 and 1991/92. Student Services Referral Sheets for 226 students were also used.

The Special Education Student Information System provided data regarding Exceptionality and placement decisions arising from Identification, Placement and Review Committee meetings.

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Summary of Recommendations

RECOMMENDATION #1:

The Student Services Referral Form needs to be revised to reflect objective information gathering.

Implications/Rationale: These forms are not always filled out appropriately, making it difficult to record and monitor students' progress as it relates to their referral characteristics.

RECOMMENDATION #2:

The analysis for referral characteristics should be re-done for the 1990-1992 school years to evaluate the use and impact of pre-referral assistance.

Implications/Questions: Only 35% of the students in this sample were shown to have a DART before referral during the 1988 and 1989 school years. Have DARTs been used more frequently since 1990? If not, why not? Should DART notes be attached to referral forms?

RECOMMENDATION #3:

The findings of the analyses of the Compensatory Education students' profiles be presented to the principals of the Comp. Ed. Schools.

Implication: The importance of having consistent curriculum goals across the system is highlighted; students with high mobility may miss the learning of important skills (particularly in the primary years).

RECOMMENDATION #4:

A short form of the Achenbach Teacher Checklist needs to be developed.

Implication: A short form may result in more consistent use by teachers and consultants of this important screening tool.

RECOMMENDATION #5:

The rate of suspensions and attendance patterns of B.E. students needs to be compared to the rates for other Exceptionalities.

Question: Are students identified as Exceptional: Behavioural in school for an adequate amount of time to provide for their educational needs?

RECOMMENDATION #6:

The existing Retirement Survey (why students leave school) needs to be modified to include all Exceptionalities by placement.

Implications: This would improve access to this vital information for tracking and accountability purposes.

RECOMMENDATION #7:

The system continues to provide ongoing support and monitoring in both the junior and intermediate divisions to encourage students to stay in school.

OBJECTIVE 1:

- A comparison was made, based on a subsample of 226 students, of referral information for students tested and eventually deemed Exceptional and for students tested and who were not deemed Exceptional. An analysis for any factors relevant to identification and placement was made.
- The proportion of Exceptional to non-Exceptional in the random sample was 41% and 59% respectively which is not different from our whole referral population; in this regard, the 226 students chosen are a good representative sample.
- Once the students were selected randomly from the database in each of the four divisions (Primary, N=61; Junior, N=56; Middle, N=57; Secondary, N=52), their completed referral forms were examined by the team with the intention of selecting relevant information which could be seen to lead to a distinction between Exceptional and non-Exceptional students.
- Referral sheets from the 1988 and 1989 school years were used only to ensure availability of follow-up data.

Percentage of Students Referred for Specific Problems (N=226)

%age of Students Referred	Problems
85%	attention/concentration
83%	work habits
83%	academic language
63%	arithmetic
44%	poor progress
42%	behaviour
39%	peer relations
17%	attendance

**Pre-referral Area/System Support
(N=226)**

%age Students	Support
17%	Guidance
14%	Adjustment
14%	Primary/Junior
7%	Special Education
7%	Speech Pathology
7%	Public Health Nurse

Pre-referral In-school Support (N=226)

%age Students	Support
35%	D.A.R.T.
58%	L.R.T.
49%	modified program
17%	buddy program
11%	Special Ed. Class support
8%	Parent Volunteers
2%	Co-op students
2%	Educational Assistants
2%	S.E.R.T.

- Pre-referral support from Community agencies was limited to less than 10% involvement, e.g., Children's Aid (6%); Child and Adolescent (2%).

FINDINGS FOR EXCEPTIONAL/NON-EXCEPTIONAL OUTCOMES:

- Attendance, health status and academic status were not significantly related to Exceptionality/non-Exceptionality outcome.
- Students who were later deemed Exceptional were seen to have received significantly more services prior to referral than students who remained non-Exceptional.
- The proportion of schools attended per grade is significantly higher for the students later deemed Exceptional.
- One factor that clearly discriminates between Exceptional and non-Exceptional and self-contained versus regular classroom placement is the intellectual, academic and behavioural profile generated by Psychological Services.

RECOMMENDATION #1:

The Student Services Referral Form needs to be revised to reflect objective information gathering.

IMPLICATIONS/RATIONALE:

These forms are not always filled out appropriately, making it difficult to record and monitor students' progress as it relates to their referral characteristics.

RECOMMENDATION #2:

The analysis for referral characteristics should be re-done for the 1990-1992 school years to evaluate the use and impact of pre-referral assistance.

IMPLICATIONS/QUESTIONS:

Only 35% of the students in this sample were shown to have a D.A.R.T. before referral during the 1988 and 1989 school years. Have D.A.R.T.s been used more frequently since 1990? If not, why not? Should D.A.R.T. notes be attached to referral forms?

OBJECTIVE 2:

An analysis was made of Compensatory Education versus non-Compensatory Education students based on a subsample of 1564 referred students. Findings for referral characteristics, gender, Comp. Ed. status, age and number of schools attended and Exceptionality are presented.

Definition of Compensatory Education Students: Students whose educational program must attempt to compensate for the effects of economically and socially disadvantaged backgrounds (promotion/non-promotion, C.A.T. scores, Otis-Lennon scores, Transfers in, Gates-MacGinitie scores):

- 17 schools were identified in 1984.
- Social workers have been assigned to 10 of the schools.
- Overall, 502 students from Compensatory Education Schools were referred to Psychological Services as compared to 1,302 students from non-Comp. Ed. Schools during the years 1989-1992. Of these, 1564 cases were analyzed.
- Overall, 40% were later deemed Exceptional; but, 51% of Comp. Ed. students referred became Exceptional while only 36% of non-Comp. Ed. students became Exceptional (See Table 1 in Appendix).
- Proportionately more Comp. Ed. than non-Comp. Ed. students are deemed Behavioural.
- Proportionately more Comp. Ed. than non-Comp. Ed. students are deemed Intellectual (EMR).
- Proportionately fewer Comp. Ed., than non-Comp. Ed. students are deemed Communication :Learning Disabled.
- Equal proportions of Comp. Ed. and non-Comp. Ed. students are deemed Communication:Speech and Language (See Table 2 in the Appendix).

Question: Is the "Intellectual" designation of proportionately more Comp. Ed. students justified?

- We cannot answer the question regarding the relative contributions of heredity and environment in determining these children's observed intellectual levels.
- However, based on the data available (I.Q. scores), the designations are justified, i.e., whether or not the students were from Comp. Ed. Schools did not have a significant impact on their distributions (See Table 2a).
- Of the 624 students who became Exceptional, 63% were placed in self-contained special education classes and 37% remained in regular classrooms.
- However, 73% of Comp. Ed. Exceptional students were placed in self-contained classes compared to only 58% of non-Comp. Ed. Exceptional students (See Table 3).
- This may be due to a strong tendency to place students with Intellectual Exceptionality in self-contained classes more often than those deemed Learning Disabled.

FINAL NOTE: Discriminant function analysis of cognitive and academic scores showed that the academic and cognitive profiles reflect more than the fact that children are from disadvantaged backgrounds and are being used appropriately in identifying Exceptional students by category.

RECOMMENDATION #3:

The findings of the analyses of the Compensatory Education students' profiles be presented to the principals of the Comp. Ed. Schools.

IMPLICATION:

The importance of having consistent curriculum goals across the system is highlighted; students with high mobility may miss the learning of important skills (particularly in the primary years).

OBJECTIVE 3:

Using a subsample of 523 Achenbach (Behaviour) profiles, the relationship between cognitive and academic profiles and Internalizing versus Externalizing behaviours was examined.

- 296 students out of the 523 showed significant profiles of disturbance (57%). The distribution was as follows:
 - 24 Internalizers
 - 123 Externalizers
 - 149 Generally Disturbed
 - 227 Non-Disturbed
- The age difference between students with disturbed profiles (9.9) and students with non-disturbed profiles (9.3) was seen to be significant.
- Females with disturbed profiles are more likely to be deemed Exceptional (40%) than boys (30%); however, boys with non-disturbed profiles are more likely (30%) than girls (20%) to be deemed Exceptional.
- No significant difference between Exceptional/non-Exceptional, disturbed/non-disturbed for verbal and nonverbal skills; the disturbed group, however, showed significantly lower academic profiles and significantly lower 3rd factor profiles (attention).
- Exceptional students demonstrated significantly higher total problem scores than regular class placements regardless of gender.
- Self-contained Exceptional students showed significantly higher total problem scores than regular class Exceptional students regardless of gender.
- Age, however, was seen to have a significant impact on total problem scores (the higher the age, the higher the problem score).
- Number of school moves did not appear to be associated with total problem score.

- No significant differences were noted for total problem score between students in Comp. Ed. Schools and students in non-Comp. Ed Schools.
- Internalizers were significantly older than externalizers regardless of gender.
- Distribution of internalizers, externalizers, and generally disturbed profiles was the same for both males and females.
- Cognitive and academic profiles did not vary according to internalizing or externalizing behavioural characteristics.
- No significant differences on probability of being deemed Exceptional or not or of being placed in self-contained or regular classrooms. (N.B.: trend for more externalizers (75%) than internalizers (50%) to be placed self-contained).

RECOMMENDATION #4:

A short form of the Achenbach Teacher Checklist needs to be developed.

IMPLICATIONS:

A short form may result in more consistent use by teachers and consultants of this important screening tool.

OBJECTIVE 4:

A subsample of 260 **secondary** students who were referred to Psychological Services for assessment was examined for: Exceptional/non-Exceptional status; composite/vocational school attendance; average and type of credits completed and type of Exceptionality; drop-out rates and type of Exceptionality and factors that predict the average number of credits earned per year. An additional sample of 234 students referred for gifted screening was also analyzed.

- Of the 260 students, 67 were female and 193 were male. 149 (57%) were non-Exceptional and 111 (43%) had been deemed Exceptional.
- Of the 234 students referred for gifted screening, 116 were female and 185 were male. 133 (56%) were deemed Gifted-Exceptional.
- As can be seen in Table 4, there was a disproportionately large percentage of Behavioural (B.E.) students attending vocational settings as compared with Non-Exceptional (N.E.) and Specific Learning Disability (S.L.D.) students. What is particularly disturbing about this finding is that unlike General Learning Disability (G.L.D.) students who are attending vocational settings, B.E. students are relatively Average in both ability and achievement.
- As can be seen in Table 5, the proportion of credits earned at different levels is similar between S.L.D. and N.E. students, and similar between B.E. and G.L.D. students. On the basis of their relatively Average ability and achievement profiles, the B.E. students should be more like the S.L.D. or N.E. students in the average number and level of credits earned per year.

- When we looked at factors that tend to predict the average number of credits that will be earned in a year, we found that in the intellectual domain, it was not the verbal or nonverbal factors but a third factor which has been described as a "freedom from distractibility" factor (ability to attend and sustain concentration on aural as well as written tasks).
- In the academic domain, reading comprehension and arithmetic computation were seen to best predict the average number of credits earned per year. What is of interest here is that these two tasks do indeed tax the ability to attend and sustain concentration and would therefore seem consistent with the intellectual finding.
- When we examined when students are most likely to drop out, we found that the drop-out rate was highest in the third year of secondary school whether composite or vocational.
- As can be seen from Table 6, the B.E. students have the highest drop-out rate among both Exceptional and non-Exceptional students and this was true regardless of composite or vocational settings, and regardless of gender.
- One would predict that students who dropped out of secondary school would likely have earned significantly fewer credits than those who would have stayed in school or graduated. This was seen for every group studied except for B.E. as can be seen in Table 6.
- With respect to the relationship between regular and self-contained classroom placement experiences in elementary grades and drop-out rates in secondary school for Exceptional students, we found little or no overall relationship (Table 7).
- The only exception to this was, again, for the B.E. students (N=14) where B.E. students placed in regular classrooms drop out at the rate of 71.4% while B.E. students with self-contained program histories drop out at the rate of 14.3%. While these differences were noted to be highly significant, it has to be pointed out that our sample was very small.
- What is also of interest is the finding that Exceptional students placed in regular classrooms in elementary school did not significantly differ from non-Exceptional students in the average number of credits earned at the secondary school level. Where they did differ was in the composition of the credits, i.e., Exceptional students from regular classroom placements earned fewer Advanced credits and more Basic credits than the non-Exceptional students.
- Table 8 shows marks on credits which significantly differentiated between Bright, Gifted-Regular Class (R.C.) and Gifted Self-contained Students (S.C). The differences for Math and Science between the S.C. and R.C. Gifted students in favour of the former should be noted.

RECOMMENDATION #5:

The rate of suspensions and attendance patterns of B.E. students needs to be compared to the rates for other Exceptionalities.

QUESTIONS/IMPLICATIONS:

Are students identified as Exceptional:Behavioural in school for an adequate amount of time to provide for their educational needs.

RECOMMENDATION #6:

The existing Retirement Survey (why students leave school) needs to be modified to include all Exceptionalities by placement.

IMPLICATIONS/QUESTIONS:

This would improve access to this vital information for tracking and accountability purposes.

RECOMMENDATION #7:

The system continues to provide ongoing support and monitoring of students in both the junior and intermediate divisions to encourage students to stay in school.

1. The first part of the document is a list of the names of the persons who were present at the meeting. The names are listed in alphabetical order.

Name	Address	City	State	Zip
John Doe	123 Main St	New York	NY	10001
Jane Smith	456 Elm St	Los Angeles	CA	90001
Bob Johnson	789 Oak St	Chicago	IL	60601
Alice Brown	101 Pine St	Houston	TX	77001
David White	202 Cedar St	Phoenix	AZ	85001
Mary Green	303 Birch St	Philadelphia	PA	19101
James Black	404 Spruce St	San Antonio	TX	78101
Susan Miller	505 Ash St	San Diego	CA	92101
Michael Davis	606 Hickory St	Dallas	TX	75201

Name	Address	City	State	Zip
Robert Wilson	707 Maple St	Austin	TX	78701
Elizabeth Taylor	808 Walnut St	Jacksonville	FL	32201
Christopher Lee	909 Chestnut St	Fort Worth	TX	76101
Patricia King	1010 Elm St	Columbus	GA	31901

APPENDIX A

Name	Address	City	State	Zip
William Hall	1111 Oak St	San Jose	CA	95101
Margaret Young	1212 Pine St	Portland	OR	97201
Daniel Scott	1313 Cedar St	Seattle	WA	98101
Linda Adams	1414 Birch St	Denver	CO	80201
Steven Baker	1515 Spruce St	San Francisco	CA	94101
Carol Garcia	1616 Ash St	Phoenix	AZ	85001
Kenneth Martinez	1717 Hickory St	San Diego	CA	92101

Name	Address	City	State	Zip
Nancy Perez	1818 Maple St	Austin	TX	78701
Gregory Roberts	1919 Walnut St	Jacksonville	FL	32201
Michelle Turner	2020 Chestnut St	Fort Worth	TX	76101
Timothy Phillips	2121 Elm St	Columbus	GA	31901
Deborah Campbell	2222 Oak St	San Jose	CA	95101
Anthony Evans	2323 Pine St	Portland	OR	97201
Kimberly Green	2424 Cedar St	Seattle	WA	98101
Christopher King	2525 Birch St	Denver	CO	80201
Amanda Wright	2626 Spruce St	San Francisco	CA	94101

TABLE 1**Comp. Ed. and Non-Comp. Ed. Students Who Became Exceptional**

	COMP. ED.	NON-COMP. ED.
Exceptional	51%	36%
non-Exceptional	49%	64%

TABLE 2

EXCEPTIONALITY	COMP. ED.	NON-COMP. ED.
Behavioural	13%	6%
Learning Disabled	52%	72%
Speech & Language	10%	9%
Intellectual (E.M.R.)	25%	13%
	(N=229)	(N=416)

TABLE 2A**Exceptionalities of Students With Performance I.Q.'s > 80**

	COMP. ED.	NON-COMP. ED.
Learning Disabled	92%	94%
Intellectual (E.M.R.)	8%	6%

TABLE 3**Placement of Comp. Ed. and non-Comp. Ed. Exceptional Students**

	COMP. ED.	NON-COMP. ED.
Self-Contained	73%	58%
Regular	27%	42%

TABLE 4**Comparison of Exceptionalities and Outcomes in Secondary School**

	N.E.	B.E.	S.L.D.	G.L.D.	REG	GIFTED	BRIGHT
Sample Size	149	14	75	22	47	133	101
Enrolment							
Composite	87%	36%	84%	32%	92%	100%	100%
Vocational	13%	64%	16%	68%	8%		
Av. number of Credits earned per year	5.9	3.6	6.2	5.2	7.2	7.4	7.3
Credit Level							
% Basic	17.1%	68.6%	26.6%	76.6%	2.9%		
% General	54.4%	28.0%	54.0%	23.7%	55.6%	19.5%	23.6%
% Advanced	25.2%	3.4%	15.2%	1.8%	41.5%	80.4%	76.7%
% Other	4.6%		5.6%	.6%			

TABLE 5**OUTCOME****Graduates (students who have left school after obtaining the OSSD)**

	N.E. (N=28)	B.E. (n=0)	S.L.D. (N=8)	G.L.D. (N=1)	REG	GIFTED (n=38)	BRIGHT (n=33)
University						65.8%	51.5%
Community College	50.0%		12.5%			14.3%	15.2%
Work	21.4%		25.0%			23.7%	24.2%
Plans Unknown	28.5%		62.5%	x			9.1%

TABLE 6**Dropouts (students who have left school without obtaining the OSSD are considered as dropouts)**

	N.E.	B.E.	S.L.D.	G.L.D.	REG	GIFTED	BRIGHT
Dropout Rate	11.5%	42.9%	10.7%	22.7%	12%	2.5%	5.0%
Av. Credits per year:							
In School	6.4	3.9	6.8	6.0			
Dropouts	4.1	3.8	2.6	2.3			

TABLE 7**Self-Contained Versus Regular Class Placement
(excluding gifted)**

	N.E. (N=149)	EX-R.C. (N=69)	EX-S.C. (N=42)	
Average number of Credits earned per year	6.1	6.2	5.0	N.E. R.C. > S.C.
Credit Level				
% Basic	17.1	36.2	58.8	N.E. < R.C. < S.C.
% General	54.4	47.4	34.7	N.E. > S.C.
% Advanced	25.2	14.9	4.3	N.E. > R.C. > S.C.
% Other	4.6	3.5	2.2	N.S.

Average number of Credits per year and Credit Levels were not significantly different between Gifted-S.C. and Gifted-R.C.

TABLE 8**MARKS**

MARKS (For Gifted and Bright students, marks for 12 of the 16 academic credits compulsory for the O.S.S.D. were compared: English 1A, Math 1A, Science 1A, Canadian History, Canadian Geography, French 1A, English 2A, Math 2A, Science 2A, English 3A, English 4A and English O.A.C. In addition, when available, students' O.A.C. averages were also compared.) Only credits which significantly differentiated between groups are shown below:

	BRIGHT (n=101)	GIFTED-R.C. (Reg. Class) (n=20)	GIFTED-S.C. (Self-Contained) (n=113)	
French 1A	79.4	80.8	83.9	R.C., S.C. > Bright
Math 2A	73.7	63.0	80.5	S.C. > Bright > R.C.
Science 2A	76.2	65.4	78.1	S.C., Bright > R.C.
English O.A.C.	76.1	78.0	80.2	R.C., S.C. > Bright
O.A.C. Average	80.2 (n=23)	- -	84.1 (n=34)	t-test p=0.66

THE BOARD OF EDUCATION FOR THE CITY OF HAMILTON

SPECIAL MEETING

1993 01 07

TO THE CHAIRMAN AND MEMBERS
DEVELOPMENT COMMITTEE

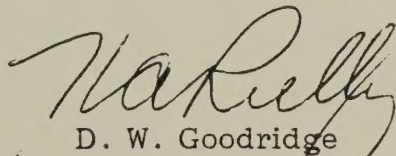
(Trustees Lowe, Bishop, Mason, Mulholland, Patenaude, Wilson and
Cunningham.)

Ladies and Gentlemen:

This will confirm that the meeting of the Development Committee
has been re-scheduled to Thursday, 1993 01 14 immediately following
the meeting of the Personnel and Organization Committee.

Your attendance is requested.

Yours truly,

for 
D. W. Goodridge
Director of Education
and Secretary

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Notice sent to all trustees.

MEMBERS ARE REQUESTED TO BRING THEIR COPY OF THE
1993 01 07 AGENDA WITH THEM TO THIS MEETING.

THE BOARD OF DIRECTORS HAS THE HONOR TO INVITE YOU

SPECIAL MEETING

May 14, 1968

TO THE MEMBERS OF THE BOARD

OF THE COMPANY

(To be held at the Board Room, 1000 Broadway, New York, New York)

Dear Sirs:

I am writing to you regarding the proposed merger of the Company with the Company. The Board of Directors of the Company has approved the merger and the shareholders of the Company are being asked to approve the merger at this special meeting.

The meeting will be held at the above address.

Very truly,
Your obedient servant,
[Signature]
Chairman of the Board

[Signature]
Chairman of the Board

v

cc: One copy to all members.

MEMBERS ARE REQUESTED TO BRING THEIR COPY OF THE
BOOK OF RECORDS WITH THEM TO THE MEETING.

THE BOARD OF EDUCATION FOR THE CITY OF HAMILTON

SPECIAL MEETING

URBAN/MUNICIPAL

CA4 ON HBL W2G

A32

1993

1993 01 28

TO THE CHAIRMAN AND MEMBERS
DEVELOPMENT COMMITTEE

(Trustees Lowe, Bishop, Mason, Mulholland, Patenaude, Wilson and
Cunningham.)

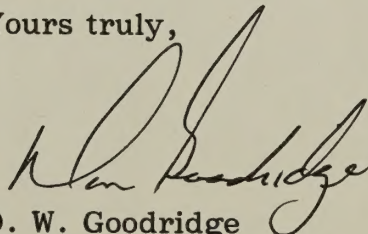
Ladies and Gentlemen:

This will confirm that the meeting of the Development Committee
has been re-scheduled to Thursday, 1993 02 11 immediately following
the meeting of the Personnel and Organization Committee.

An agenda will be included in next week's delivery.

Your attendance is requested.

Yours truly,



D. W. Goodridge
Director of Education
and Secretary

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Notice sent to all trustees.

URBAN/MUNICIPAL

CA4 ON HBC W26
A32
1993

A G E N D A

DEVELOPMENT COMMITTEE

1993 02 11

Confirmation of the minutes of the regular meeting of 1993 01 14.

G E N E R A L

BUSINESS ARISING OUT OF THE MINUTES:

1. Report re Provincial Mathematics Benchmarks
Validation Response

Pages 1 to 8

1993 02 11

To: Chairman and Members
Development Committee
Hamilton Board of Education

Re: ***Provincial Mathematics Benchmarks Validation Response***

Enclosed is the Executive Summary and detailed validation response from the Hamilton Board of Education to the Ministry of Education's Provincial Mathematics Benchmarks. Board approved responses are to be submitted to the Ministry of Education.

Recommendation:

That the Provincial Mathematics Benchmarks Validation response be approved and forwarded to the Ministry of Education.

Prepared by: G. D. Knill, Mathematics Co-ordinator
Submitted by: E. G. Bond, Superintendent of Program
Approved by: D. W. Goodridge, Director of Education and Secretary

Chairman and Members
The Board of Directors
The Board of Directors

THE BOARD OF DIRECTORS

The Board of Directors is composed of the following members:

THE BOARD OF DIRECTORS

The Board of Directors is composed of the following members:

- Chairman: Mr. J. H. Smith
- President: Mr. J. H. Smith
- Vice President: Mr. J. H. Smith
- Secretary: Mr. J. H. Smith
- Treasurer: Mr. J. H. Smith

EXECUTIVE SUMMARY

Provincial Mathematics Benchmarks Validation Ministry of Education

Background:

The draft of the Benchmarks and the validation materials were released by the Ministry in late October. On November 5, 1992, the Benchmarks validation package was received for information by the Development Committee.

Responses were received from Hamilton educators, parents' groups, business and industry, Mohawk and McMaster faculties. In particular the following groups participated in the validation process:

- Area 1 Response Team
- Area 2/4 Response Team
- Area 3 Response Team
- George R. Allen Elementary School parents
- Hamilton Council of Home and School Associations
- Industry-Education Council/Hamilton-Wentworth
- Mathematics Faculty, McMaster University
- Mathematics Faculty, Mohawk College
- Mathematics Department Heads
- Special Education Advisory Committee

The responses were collated into one central response which is attached to the Executive Summary. In all about 100 people participated in the process.

General Summary of Responses:

Part A — Overall Structure and Components of Benchmarks

- The responders
- agree with the framework or organization of the benchmarks.
 - see a need for benchmarks.
 - want benchmarks extended to include grade 12/OAC.
 - agree the benchmarks provide standards of achievement for use by teachers, school boards, and the province. The benchmarks will only be useful for parents and the community if there is in-service.
 - do not like the current draft of the benchmarks because the expectations for students are too low. The responders feel our students must be challenged if they are to compete in the twenty-first century.
 - do not agree that all the sample assessment activities should be all paper and pencil type questions. The high percentage of multiple choice questions is also a concern.

Part B — Specific Mathematics Benchmarks

Grade 3 Benchmarks

- The responders
- in general, agree with the grade 3 benchmarks.
 - are very concerned about the low expectations and the lack of challenge for students.

Grade 6 Benchmarks

- The responders
- in general, agree with the grade 6 benchmarks.
 - are very concerned about the low expectations and lack of challenge for students.

Grade 9 Benchmarks

- The responders
- disagree with the benchmarks for grade 9 because:
 - (a) the assessment activities are poorly written;
 - (b) much of the material is a repeat of grade 8;
 - (c) provision for destreamed classes in grade 9 has not been addressed.
 - are concerned about the lack of challenge for many students.

Chapter 1: Introduction to the course

Section 1.1: Welcome to the course

The purpose of this course is to provide you with a solid foundation in the field of...

By the end of this course, you should be able to...

After completing this course, you will have gained a deep understanding of...

Throughout the course, we will explore various topics and concepts that are essential for your understanding of the field. We will also discuss the latest research and developments in the field.

Our primary goal is to equip you with the knowledge and skills necessary to succeed in your studies and future career. We will provide you with a comprehensive overview of the field, as well as the opportunity to delve deeper into specific areas of interest.

We will also discuss the importance of critical thinking and problem-solving skills in the field. You will have the opportunity to apply these skills to real-world scenarios and projects.

Section 1.2: Course objectives

Learning Objectives

- Understand the fundamental concepts and principles of the field.
- Apply the knowledge and skills learned in the course to solve problems.
- Analyze and evaluate the effectiveness of different approaches and methods.

Assessment Objectives

- Demonstrate a deep understanding of the field and its key concepts.
- Apply the knowledge and skills learned in the course to solve complex problems.
- Analyze and evaluate the effectiveness of different approaches and methods.

Course 2: Introduction to the course

The purpose of this course is to provide you with a solid foundation in the field of...

By the end of this course, you should be able to...

After completing this course, you will have gained a deep understanding of...

Throughout the course, we will explore various topics and concepts that are essential for your understanding of the field. We will also discuss the latest research and developments in the field.

Our primary goal is to equip you with the knowledge and skills necessary to succeed in your studies and future career. We will provide you with a comprehensive overview of the field, as well as the opportunity to delve deeper into specific areas of interest.

Part A: Response to Overall Structure and Components

Please indicate the extent of your agreement by checking the appropriate box for each statement:

1. The framework used for the development of provincial benchmarks is coherent. (See Appendix Ib of document)

strongly disagree
☐

disagree
☐

agree
☒

strongly agree
☐

Comments: Terminology needs clarification, for example, "critical learning outcomes" and "all", "most", and "some". The six strands instead of the traditional three -- number, measurement, geometry -- are an improvement.

2. The components of the provincial benchmarks framework are clearly stated.

a) Critical learning outcomes

☐

☐

☒

☐

b) Benchmarks

☐

☐

☒

☐

c) Sample evidence

☐

☐

☒

☐

d) Sample assessment activities

☐

☐

☒

☐

Comments: The sample assessment activities must be more than paper and pencil. Benchmarks and the activities are not challenging. Benchmarks are vague in many cases.

3. The three-part structure that identifies achievement for *all*, *most*, and *some* students is realistic.

☐

☐

☒

☐

Comments: The "all", "most", and "some" structure needs changing or clarifying. What percent of students are in each category? More achievement data is needed to establish this structure. Need higher expectations for "all". Some students will never reach "all".

4. The sample evidence clarifies the benchmarks statements.

☐

☐

☒

☐

Comments: Language is not clear. A glossary of terms is needed. Need more problem solving. "Sample evidence" would be useful for all grades. Some "sample evidence" reiterates but does not clarify.

5. It is appropriate to develop provincial benchmarks for the end of each division (grades 3, 6, 9).

☐

☐

☒

☐

Comments: Benchmarks should be developed for all grades. Instructions must be clear as to use. Must be amplified to define a complete program.

Part A: Response to Overall Structure and Components (cont'd)

Please indicate the extent of your agreement by checking the appropriate box for each statement:

strongly
disagree

disagree

agree

strongly
agree

6. It is important to develop provincial benchmarks (standards) for grade 12/OAC (graduation).

☐
☐
☒
☐

Comments: The revision of current courses is a priority. Develop benchmarks for every grade.

7. The provincial mathematics benchmarks, as stated, provide clearly stated standards of achievement for:

a) use by teachers for developing student assessment instruments.

☐
☐
☒
☐

Comments: Teachers need in-service. Only if integrated with curriculum. They are too vague to be useful. Too broad for teachers to know what is wanted.

b) use by school boards developing board-wide assessments.

☐
☐
☒
☐

Comments: Do not use for student promotion. Do not use for teacher assessment. Use for teacher/school accountability.

c) use by the province for developing provincial assessments.

☐
☐
☒
☐

Comments: Not necessary. Use them as part of Provincial Reviews.

d) parents and community to understand what is expected by the end of grades 3, 6, and 9.

☒
☐
☐
☐

Comments: Parents will need in-service. This will help parents know what goes on in school. Most parents could not follow the levels of difficulty. Too much jargon. In the current format is a professional document only.

8. Overall assessment of the provincial mathematics benchmarks.

☐
☒
☐
☐

Poorly developed and designed. Just a starting point. Where's the challenge? Expectations too low. Not usable as is.

Part B: Response to Specific Mathematics Benchmarks

Grade 3

Please indicate the extent of your agreement by checking the appropriate box for each statement:

	strongly disagree	disagree	agree	strongly agree
P-1.1	☐	☐	☒	☐
P-2.1	☐	☐	☒	☐
P-2.2	☐	☐	☒	☐
P-3.1	☐	☒	☐	☐
P-3.2	☐	☐	☒	☐
P-4.1	☐	☐	☒	☐
P-5.1	☐	☐	☒	☐
P-6.1	☐	☐	☒	☐

Comments: (2) (4) (5) No substance. Activities minimal. More detail needed. More problem solving.

Comments: (2) (4) (5) Here "most" should become "all".

Comments: (2) (3) (6) Stress mastery of number operations. Include division in "all".

Comments: (2) (4) (6) All material currently covered in grades 1 & 2. Sample assessment activities are poor. No relevance to slides, flips, and turns.

Comments: (1) (4) (6) Do not mix 2D and 3D shapes

Comments: (2) (4) (5) All students must illustrate patterns with symbols.

Comments: (2) (4) (6) Language is difficult. "Sample evidence" is weak.

Comments: (2) (4) (6) Use non-standard units also.

Overall Assessment of Grade 3 provincial mathematics benchmarks.

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

Comments: The goals are attainable because the expectations are too low. Does provide a more balanced mathematics program. Modify for different areas and cultures.

Please use the following codes for comments, if applicable:

- | | |
|---|---|
| (1) The "all students will" part of the benchmarks statement is too difficult. | (4) The "most students will" part of the benchmarks statement is too easy. |
| (2) The "all students will" part of the benchmarks statement is too easy. | (5) The "some students will" part of the benchmarks statement is too difficult. |
| (3) The "most students will" part of the benchmarks statement is too difficult. | (6) The "some students will" part of the benchmarks statement is too easy. |

Part B: Response to Specific Mathematics Benchmarks

Grade 6

Please indicate the extent of your agreement by checking the appropriate box for each statement:

	strongly disagree	disagree	agree	strongly agree
J-1.1	☐	☐	☒	☐
J-2.1	☐	☐	☒	☐
J-2.2	☐	☐	☐	☒
J-3.1	☐	☐	☒	☐
J-3.2	☐	☐	☐	☒
J-4.1	☐	☐	☒	☐
J-5.1	☐	☐	☐	☒
J-6.1	☐	☐	☒	☐

Comments:	①	③	⑤	Too easy. "Most" should be "all". Clarify "simple, non-routine". Need manipulatives.
Other:				
Comments:	②	④	⑥	Too easy. All students should estimate. Need number line solutions. "Sample evidence" is poor.
Other:				
Comments:	②	④	⑥	Too easy. "Sample evidence" is poor.
Other:				
Comments:	②	④	⑥	Too much motion geometry. Most covered in grades 1 and 2.
Other:				
Comments:	☐	☐	☐	Solid. At the appropriate level.
Other:				
Comments:	☐	☐	☐	Excellent. Assessment activities too vague.
Other:				
Comments:	②	④	⑥	Too easy. Need probability "some" and "all".
Other:				
Comments:	②	☐	☐	Change "most" to "all". "Sample evidence" is poor.
Other:				

Overall Assessment of Grade 6 provincial mathematics benchmarks.

☐	☐	☒	☐
--------------------------	--------------------------	-------------------------------------	--------------------------

Comments: Many changes needed before the package is useable. No challenge. Too much jargon. Level of expected achievement is too low. Teachers needed to be encouraged to teach beyond the standards.

Please use the following codes for comments, if applicable:

- | | |
|---|---|
| ① The "all students will" part of the benchmarks statement is too difficult. | ④ The "most students will" part of the benchmarks statement is too easy. |
| ② The "all students will" part of the benchmarks statement is too easy. | ⑤ The "some students will" part of the benchmarks statement is too difficult. |
| ③ The "most students will" part of the benchmarks statement is too difficult. | ⑥ The "some students will" part of the benchmarks statement is too easy. |

Part B: Response to Specific Mathematics Benchmarks

Grade 9

Please indicate the extent of your agreement by checking the appropriate box for each statement:

	strongly disagree	disagree	agree	strongly agree
T-1.1	☐	☐	☒	☐
T-2.1	☐	☐	☒	☐
T-2.2	☒	☐	☐	☐
T-3.1	☒	☐	☐	☐
T-3.2	☐	☐	☐	☒
T-4.1	☐	☒	☐	☐
T-4.2	☒	☐	☐	☐
T-5.1	☐	☒	☐	☐
T-5.2	☒	☐	☐	☐
T-6.1	☐	☒	☐	☐

Comments: (2) (4) (6) Vague. Awkward. Not useable.
No real problem solving. "All"
Other: is too difficult. Same as grade 8.

Comments: (2) (4) (6) Badly worded. Too abstract.
Definitions are needed.

Other: _____

Comments: (2) (4) (6) Too easy.

Other: _____

Comments: (2) (4) (6) Major omissions here. Need
more manipulative.
Other: "All" is harder than "most".

Comments: (1) (4) (6) More emphasis on graphing.

Other: _____

Comments: (2) (4) (6) Benchmarks are not clear.

Other: _____

Comments: (2) (4) (6) More examples needed. Not much
here.

Other: _____

Comments: (2) (4) (6) Not much in the "some" and
"most" categories.

Other: _____

Comments: (1) (3) (5) Very poor section. Questions
are badly worded. Benchmarks
Other: are not clarified by the "sample evidence"

Comments: (2) (4) (6) Section must be
more challenging.

Other: _____

Overall Assessment of Grade 9 provincial mathematics benchmarks.

The same as grade 8.

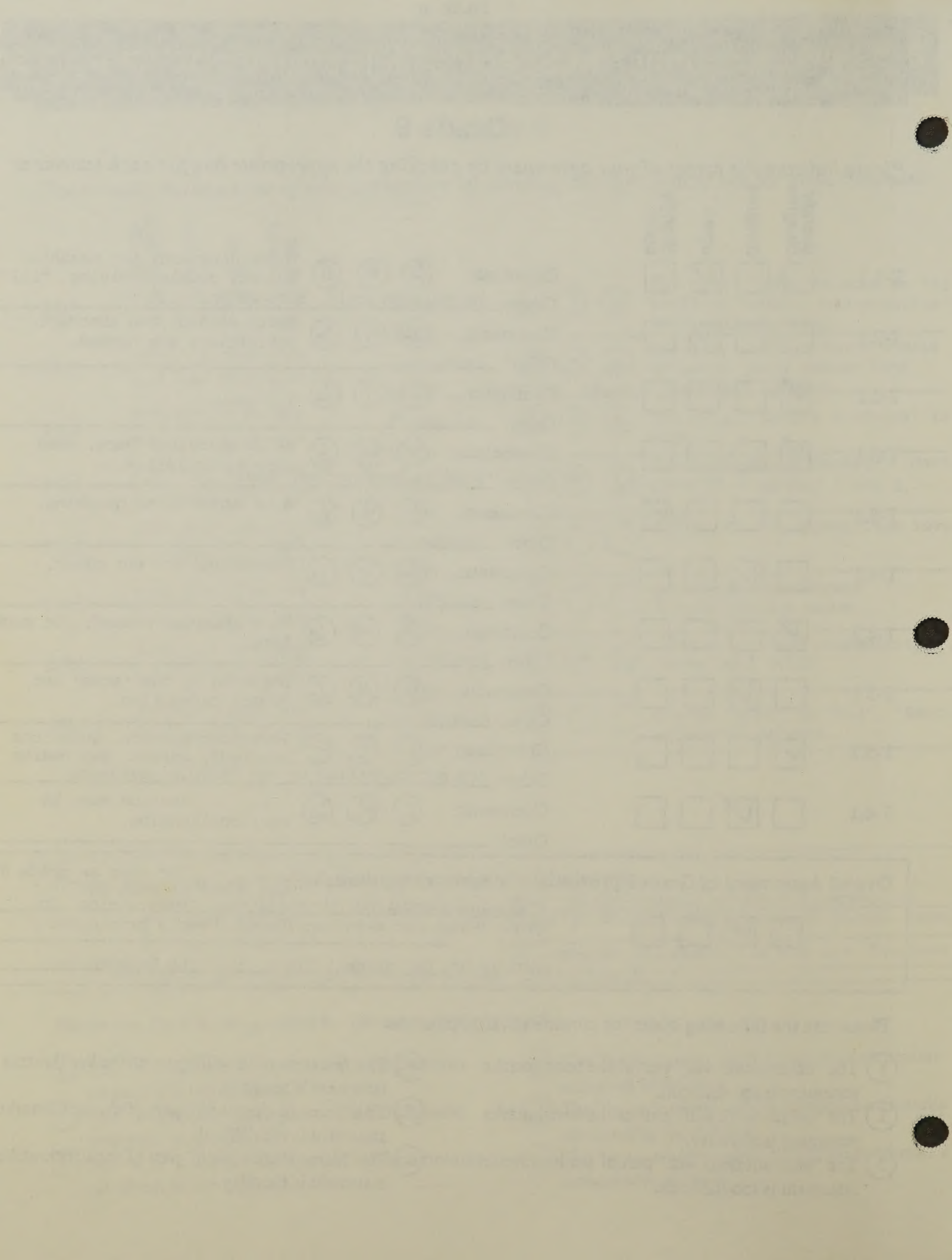
☐	☒	☐	☐
--------------------------	-------------------------------------	--------------------------	--------------------------

Comments: Not clear to what is
required. No challenge. "Destreaming" in
grade 9 has not been considered. Need a provincial

curriculum for grade 9 first, then the benchmarks.

Please use the following codes for comments, if applicable:

- | | |
|---|---|
| (1) The "all students will" part of the benchmarks statement is too difficult. | (4) The "most students will" part of the benchmarks statement is too easy. |
| (2) The "all students will" part of the benchmarks statement is too easy. | (5) The "some students will" part of the benchmarks statement is too difficult. |
| (3) The "most students will" part of the benchmarks statement is too difficult. | (6) The "some students will" part of the benchmarks statement is too easy. |



THE BOARD OF EDUCATION FOR THE CITY OF HAMILTON

SPECIAL MEETING

1993 02 23

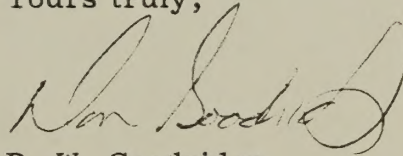
TO THE CHAIRMAN AND MEMBERS
DEVELOPMENT COMMITTEE

(Trustees Lowe, Bishop, Mason, Mulholland, Patenaude, Wilson and
Cunningham.)

Ladies and Gentlemen:

Please be advised that, due to a lack of Agenda items for this
month, the March meeting of the Development Committee scheduled for
Thursday, 1993 03 04 has been CANCELLED.

Yours truly,



D. W. Goodridge
Director of Education
and Secretary

rm

Notice sent to all Trustees.

1912

THE BOARD OF SUPERVISORS OF THE COUNTY OF ALBANY

OFFICE OF THE CLERK



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